

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1- 25 (cancelled).

26. (currently amended) [[The]] A method of ~~claim 25~~, manufacturing a stay-in-place composite shell, the method comprising:

applying a liner to an exterior surface of a tubular member, the liner including at least one sheet of a water-impermeable material;

applying a fabric layer having a plurality of fibers to the liner;

impregnating the fabric layer with a resin matrix to form a resin-impregnated fabric layer;
and

removing the tubular member once the resin matrix cures to form a composite shell having an inner wall surface defining an enclosure into which concrete may be poured and allowed to harden,

wherein the plurality of fibers ~~elongate as the~~ are capable of elongating in the event that concrete is poured into the enclosure of the composite shell due to a weight of the concrete, and partially ~~shrink~~ shrinking back as the concrete dries to compensate for shrinkage of the concrete, and

wherein the liner protects the composite shell from alkalinity in the concrete.

27. (currently amended) The method of claim ~~[[25]]~~ 26, wherein the ~~step of~~ applying a fabric layer to the liner comprises ~~the steps of~~:

suspending the tubular member with the liner applied to the exterior surface of the tubular member; and

rotating the tubular member while wrapping the fabric layer around the liner.

28. (currently amended) ~~[[The]]~~ A method of claim 25, manufacturing a stay-in-place composite shell, the method comprising:

applying a liner to an exterior surface of a tubular member, the liner including at least one sheet of a water-impermeable material;

applying a fabric layer having a plurality of fibers to the liner;

impregnating the fabric layer with a resin matrix to form a resin-impregnated fabric layer;
and

removing the tubular member once the resin matrix cures to form a composite shell having an inner wall surface defining an enclosure into which concrete may be poured and allowed to harden,

wherein the step of removing the tubular member once the curable resin cures to form a composite shell having an inner wall surface defining an enclosure comprises ~~the steps of~~:

cutting a slit in the tubular member;

pulling a portion of the tubular member inward at the slit to reduce the diameter of tubular member; and

pulling the tubular member away from the liner to form a composite shell having an inner wall surface defining an enclosure.

29. (currently amended) A method of manufacturing a stay-in-place composite shell, the method comprising ~~the steps of~~:

wrapping a water-impermeable liner around a mandrel;

wrapping a fabric layer having a plurality of fibers, around an exterior surface of the water-impermeable liner;

impregnating the fabric layer with a resin matrix; and

separating the mandrel from the water-impermeable liner and fabric layer once the resin matrix cures, to form a composite shell having an inner wall surface defining an enclosure into which concrete may be poured and allowed to harden to form a concrete core,

wherein the plurality of fibers ~~elongate as~~ are capable of elongating in the event that concrete is poured into the enclosure of the composite shell due to a weight of the concrete, and partially ~~shrink~~ shrinking back as the concrete dries to compensate for shrinkage of the concrete, and

wherein the water-impermeable liner is wrapped with its lateral edges secured together to line an inner wall surface of the composite shell and protects the composite shell from alkalinity in the concrete core.

30. (currently amended) The method of claim 29, further comprising ~~the step of~~:

rotating the mandrel about a center axis while wrapping a fabric layer impregnated with a resin matrix and having a plurality of fibers, around an exterior surface of the water-impermeable liner.

31. (currently amended) A method of manufacturing a stay-in-place composite shell, the method comprising ~~the steps of~~:

wrapping a water-impermeable liner around an exterior surface of a reusable form;

rotating the reusable form about an axis while applying a fabric layer impregnated with a resin matrix and having a plurality of fibers, to the exterior surface of the water-impermeable liner; and

removing the reusable form once the resin matrix cures, to form a composite shell having an inner wall surface defining an enclosure into which concrete may be poured and allowed to harden to form a concrete core,

wherein the plurality of fibers ~~elongate as~~ are capable of elongating in the event that concrete is poured into the enclosure of the composite shell due to a weight of the concrete, and partially shrink back as the concrete dries to compensate for shrinkage of the concrete, and

wherein the liner is wrapped with its lateral edges secured together to line an inner wall surface of the composite shell and protect the composite shell from alkalinity in the concrete core.

32. (new) The method of claim 26, wherein the plurality of fibers are selected from the group consisting of glass, carbon, boron, graphite, polyaramid, boron, Kevlar, silica, quartz, ceramic, polyethylene, and aramid.

33. (new) The method of claim 26, wherein the plurality of fibers have a lesser percent of elongation than the resin matrix.

34. (new) The method of claim 33, wherein a percent of elongation of the plurality of fibers and resin matrix is adapted to prevent a gap from forming between the concrete core formed in the enclosure and the composite shell, when the concrete shrinks.

35. (new) The method of claim 26, wherein the liner comprises one of the group consisting of plastic, natural rubber, polystyrene, vinyl polyethylene, chlorosulfonated polyethylene, synthetic rubber, ethylene-propylene-diene (EPDM) terpolymer, and other water proofing membrane.

36. (new) The method of claim 26, further comprising:
providing an anchor extending into the composite shell and projecting into the enclosure of the composite shell; and
affixing a reinforcing bar to the composite shell for strengthening the stay-in-place form coupled to the anchor.

37. (new) The method of claim 36, wherein the reinforcing bar comprises a fiber composite.

38. (new) The method of claim 36, wherein the reinforcing bar comprises steel.

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